

REMARKS

Claims 1, 3-7, and 9-13 are pending and are rejected. Claims 1 and 7 are amended. Claims 5 and 11 are canceled without prejudice.

Applicant appreciates the courtesy of the December 10, 2007 telephone interview with the Examiner. Applicant has amended the claims as requested to more specifically define Z'. Applicant understanding is that this Amendment will put the application in condition for allowance.

CLAIM REJECTIONS UNDER 35 U.S.C. §103

Claims 1, 3-7, and 9-13 are rejected under 35 U.S.C. §103(a) as obvious over either Unger or Klaveness. The Examiner states:

This [Applicant's arguments that his shell, where each polar head group is linked to a straight-chain hydrophobic group selected as having the recited chain lengths] is found non-persuasive because, claim 1 as amended now recites the limitations of previously rejected claim 2 into claim 1. However, claim 2 and dependent claims therefrom were rejected for reasons set forth in the Office Action. For example, Unger teaches combinations of all taught shell materials in columns 20-22 and column 29, lines 47+) and Klaveness teaches combinations of shell materials (see column 2). Applicant's arguments amount to a general allegation that the claims define a patentable invention without specifically pointing out how the language of the claims patentably distinguishes them from the references.

Applicant respectfully disagrees. Claims 5 and 11 are canceled, rendering the rejection moot with respect to these claims.

All remaining claims recite that, within the shell,

each compound [has] a polar head group linked to a hydrophobic group selected as having different chain lengths sufficient for longer chains to assemble beneath adjacent shorter chains thereby enhancing rigidity of the shell... (emphasis added).

In Applicant's composition and method, each compound is selected in view of its adjacent compounds; the compounds are not merely arbitrarily selected. Depending on the chain length of its adjacent compounds (one on each side), each compound must have a longer or a shorter chain so that compounds with relatively longer chains can assemble beneath compounds with relatively shorter chains. This corrugation, resulting from the claimed spatial configuration of lipids, provides enhanced rigidity to the shell.

Contrary to the Examiner's assertion, Applicant has not made a general allegation. Rather, Applicant has claimed that his composition (independent claim 1) and method (independent claim 8) requires that these compounds are thus configured so that the resulting shell has the desired rigidity.

Unger does not teach, motivate, or suggest Applicant's composition and method requiring this selection in order to achieve the configuration that enhances shell rigidity. In columns 20-22,

Unger simply lists specific lipids, introducing his lists with the following statements "Lipids which may be used to create lipid microspheres include, but are not limited to:..." (col. 20 lines 31-32); "In addition, examples of compounds used to make mixed systems include, but by no means are limited to ..." (col. 21 lines 15-16); "Other useful lipids or combinations thereof apparent to those skilled in the art which are in keeping with the spirit of the present invention are also encompassed by the present invention." (col. 21 line 66 to col. 22 line 2). In column 22 lines 20-39, Unger teaches cationic polymers such as polypeptides (polylysine, polyarginine, polyhomoarginine, polyhomolysine) that are bound to the lipid layer to anchor the polymers into the lipid. The remainder of column 22 recites "bioactive materials" and "emulsifying or stabilizing agents". In column 29, lines 47+, Unger describes imaging devices, and then describes physical properties of the gaseous precursor-filled liposomes such as diameter, resonant frequency, power adjustments, etc.

As previously asserted, nowhere in these sections that the Examiner applies, nor anywhere else in Unger, does Unger teach, motivate, or suggest, selection of lipids of differing lengths in order to enhance rigidity of the shell, as Applicant claims.

Klaveness does not teach, motivate, or suggest, Applicant's composition and methods. The Klaveness section that the Examiner believes teaches "combinations of shell materials" (col. 2) does not teach Applicant's selection of lipids of differing lengths in order to enhance rigidity of the shell. The only teaching of any selection that Klaveness provides relates to selection of biodegradable linkages (i.e., bonds), not lipids, and only so contrast agents can be better metabolized. One of ordinary skill in the art would appreciate that Klaveness' selection of biodegradable linkages to enhance metabolism differs from Applicant's selection of lipids of differing lengths to enhance rigidity of the shell.

For at least these reasons, analyzed above, neither Unger nor Klaveness teach, suggest, or motivate, Applicant's compounds in which

each compound [has] a polar head group linked to a hydrophobic group selected as having different chain lengths sufficient for longer chains to assemble beneath adjacent shorter chains thereby enhancing rigidity of the shell... (emphasis added).

Thus, Applicant asserts that neither Unger nor Klaveness renders claims 1, 3-7, or 9-13 obvious, and request the 35 U.S.C. §103 rejections be withdrawn.

CONCLUSION

Applicant believes the application is in complete condition for allowance. No fees are believed due but, if necessary, they are authorized to be charged to Deposit Account No. 28-0809.

The Examiner is invited to contact Applicant's undersigned representative with questions.

Respectfully submitted,

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